

PCT COOPERATION TREATY

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NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

| | |
|---|---|
| Date of mailing (day/month/year) 13 November 2000 (13.11.00) | |
| International application No. PCT/US00/06242 | Applicant's or agent's file reference CURL-001 PCT |
| International filing date (day/month/year) 10 March 2000 (10.03.00) | Priority date (day/month/year) 12 March 1999 (12.03.99) |
| Applicant WARD, Stephen, A. et al | |

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

12 October 2000 (12.10.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

| | |
|--|--|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland | Authorized officer Juan Cruz |
| Facsimile No.: (41-22) 740.14.35 | Telephone No.: (41-22) 338.83.38 |

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|--|---|--|
| Applicant's or agent's file reference e 2687 pct | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/US00/06242 | International filing date (day/month/year) 10/03/2000 | Priority date (day/month/year) 12/03/1999 |
| International Patent Classification (IPC) or national classification and IPC G06F1/00 | | |
| Applicant CURL CORPORATION et al. | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

| | |
|---|---|
| Date of submission of the demand 12/10/2000 | Date of completion of this report 09.08.2001 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized officer Harms, C Telephone No. +49 89 2399 7476  |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US00/06242

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

| | | | | |
|------------|---------------------|------------|----------------|------------|
| 1-10,12-38 | as originally filed | | | |
| 6a,11 | as received on | 23/04/2001 | with letter of | 23/04/2001 |

Claims, No.:

| | | | | |
|------|----------------|------------|----------------|------------|
| 1-22 | as received on | 23/04/2001 | with letter of | 23/04/2001 |
|------|----------------|------------|----------------|------------|

Drawings, sheets:

| | |
|-----|---------------------|
| 1-8 | as originally filed |
|-----|---------------------|

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/06242

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|------|--------|------|
| Novelty (N) | Yes: | Claims | 1-22 |
| | No: | Claims | |
| Inventive step (IS) | Yes: | Claims | 1-22 |
| | No: | Claims | |
| Industrial applicability (IA) | Yes: | Claims | 1-22 |
| | No: | Claims | |

- 2. Citations and explanations
see separate sheet**

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US00/06242

The present application relates to a system and a method for controlling the use of digital content through embedding licensing information thereinto. The digital content is processed subject to the status of the license and to the extent permitted by the license restrictions.

Closest Prior Art: WO 9845768

Other than in the closest prior art, claim 1 requires the license to be examined in order to determine whether it is an implicit or an explicit license. That is, determining whether the license can be authenticated based on information within the license itself, or whether information external to the license (e.g. from a license server) and digital content is required to authenticate the license (see features of steps 2 and 3 of claim 1).

The same differences were identified with respect to the other documents cited in the search report which do not support explicit licenses (see form of the licenses in EP0686906 column 10 line 5-12 and column 12 line 5-11; US9721356 page 25 line 3-18 and Fig. 11 and US5287408 abstract and column 3 line 13-53)

Explicit licenses have several advantages over implicit licenses; e.g. the ease of revocation or the charge of fees based upon usage of the digital content (see further advantages on page 7 of the description). Since these effects are not or differently achieved in the prior art, the separation between implicit and explicit licenses is not obvious and thus demonstrates an inventive step.

Independent claim 16 discloses the apparatus corresponding to the method of claim 1.

In view of the above, the subject-matter of independent claims 1 and 16 is new and inventive; Article 33(2) and (3) PCT.

Claims 2-15 and 17-22 are dependent on claim 1 respectively claim 16 and fulfill therefore as well the requirements of Article 33(2) and (3) PCT.

The amendments introduced to the claims are either supported by the description from page 18 line 13 - page 20 line 10 or refer to clarifications with regard to Article 6 PCT.

PCT/US00/06242
CURL CORPORATION, et al.
Our Ref.: E 2687 PCT

23. April 2001

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(Insert on page 6 between lines 7 and 8)

Prior attempts to control or track the usage of digital content relate to methods for the secure distribution of documents, computer programs, web objects, and the like. For example, WO 98/45768 is directed to ensuring that each purchaser of a program gets a unique version of the program so that illicit copies of the program may be traced back to the original user. That is, the system described relates to methods of creating, distributing, and installing software that is uniquely authenticable and traceable to a particular purchaser. In particular, identifying information obtained from an end user, along with licensing information is used to create a data set that is embedded in the software. Cryptographic methods are used to produce a signature of the data set and of the application to ensure the data set and application are not altered or tampered with. A secure distribution agent (SDA) on a vender's server cooperates with a user installation agent (UIA) on the user's computer to obtain the identifying information, embed the signatures in the software, and transfer the modified software to the user's computer.

An authentication and reading program is used to access the software. The authentication and reading program uses a known public key to decrypt the signatures embedded in the software and compare them to locally calculated signatures to verify the software and embedded data have not been tampered with. If any of the checks is not successful, then authentication fails.

European patent 0686906 A2 describes another method for enhancing software security and distribution. In this reference, a "passport," or security wrapper, is built around the software object code. Specifically, cryptographic techniques are used to associate a programmers license with the software object code, and to authenticate the license and object code prior to executing the object code. The disclosed system, therefore serves to ensure that a program is traceable to its author, and to ensure the integrity of the software program itself.

A web site copy protection system and method are disclosed in document WO 98/25373. Here, objects in a web site, such as photos, images, text, etc. may be protected by requiring them to be accessed via applets in the web page code. When a user accesses the web site for the first time, a license is presented to the user that specifies restrictions in the use of the site. A database keeps track of those users that have accepted the license, and what level of access each user has to objects in the web site. When an object is accessed, such as by using a web browser, applets in the web page source code cause the database to be consulted to determine whether the user is authorized to access the object. If access is authorized, the applet returns the underlying object to be rendered by the web browser. In one embodiment, the database and applets reside on a server of a third party that provides copy right protection services.

-11-

further licensing validation steps (to ensure payment of a license fee for commercial use) prior to accessing the computer programs. Thus, the module has a built-in understanding of different types of license forms and can grant immediate access to the computer programs by non-commercial content while preserving control over access to the computer programs by commercial content. This encourages the development of content by allowing free access to the computer programs for non-commercial use while at the same time providing a mechanism for developers of the computer program to receive a financial return by requiring a license fee for commercial use.

FIG. 1(a) and FIG. 1(b) are block diagrams of illustrative embodiments of a computer system implementing the invention. The system utilizes computer 100 running operating system 101. Computer 100 can be a conventional personal computer such as those sold by Compaq Computer Corporation, IBM, and Apple. Computer 100 may also be another device such as a game console, set-top box, or Internet appliance. Operating system 101 is any operating system compatible with the underlying computer, such as Microsoft Windows 98[®], Microsoft Windows NT[®], Linux[®], Apple OS[®], and the like.

With reference to FIG. 1(a), a first embodiment of the invention uses browser 102 as a substrate for plug-in 103. FIG. 1(b) illustrates an alternative embodiment of the invention where application 104 is provided to instead of browser 102 and plug-in 103. In the embodiment of FIG. 1(b), the mechanism for controlling access to a computer program is included with in the computer program itself; however, one of

-39-

Claims:

1. A method of licensing digital content (201), the method comprising:
examining the digital content (201) to identify licensing data (300-311)
within the digital content (201) indicating that processing of the digital content (201)
is subject to a license;
examining (506) the licensing data (300-311) to determine if the
license requires explicit verification (507);
if the license requires explicit verification (507), determining a status
of the license (550-567) based on information not present within the licensing data
(300-311); and
processing the digital content (201) subject to the status of the license
and to the extent permitted by any license restrictions (567).
2. The method of claim 1 further comprising determining a status of the
license based on information within the licensing data (300-311) if the license does
not require explicit verification (510-526).
3. The method of claim 1 wherein the licensing data (300-311) includes a
plain text portion (301, 302).
4. The method of claim 1 wherein the licensing data (300-311) includes
an encrypted portion (303-311).
5. The method of claim 1 wherein determining a status of the license
based on information not present within the licensing data (300-311) comprises
obtaining the status of the license from a license server (403).
6. The method of claim 5 further comprising caching a response (405)
from the license server (403); wherein determining a status of the license comprises
inspecting the cache (555) for a response from the server (403) and obtaining the
status of the license from the server (403) only if the status of the license cannot be
determined from the inspection of the cache.

-40-

7. The method of claims 1-6 wherein processing the digital content (201) subject to the status of the license is done in parallel with determining the status of the license (500-567).

8. The method of claims 1-6 wherein processing the digital content (201) subject to the status of the license comprises processing at least a portion of the digital content (201) in parallel with determining the status of the license.

9. The method of claims 1-7 further comprising examining the licensing data (310, 311) to determine whether the digital content (201) has been altered; wherein the digital content (201) is processed only if it has not been altered.

10. The method of claim 1 wherein determining a status of the license comprises determining that the license is for non-commercial use, and indicating to a user that the digital content (201) is licensed for non-commercial use.

11. The method of claims 1-7 wherein:
first software embeds in the digital content (201) the licensing data (300-311); and
second software:
examines the digital content (201) to identify licensing data (300-311) within the digital content (201) indicating that processing of the digital content (201) is subject to a license;
examines the licensing data (300-311) to determine if the license requires explicit verification (507);
determines a status of the license based on information not present within the licensing data (300-311) if the license requires explicit verification (570);
and
processes the digital content (201) subject to the status of the license and to the extent permitted by any license restrictions (566, 574).

-41-

12. The method of claim 11 wherein the second software determines the status of the license by requesting the status of the license from a server (404, 605).

13. The method of claim 12 wherein the second software caches a response from the server (572), and determines a status of the license by inspecting the cache for a response (555) from the server (403) and requesting the status of the license from the server (403) only if the second software fails to determine the status of the license by the inspection of the cache.

14. The method of claim 13 wherein the second software processes [processing the digital content subject to the determined status comprises processing] at least a portion of the digital content (201) in parallel with determining the status of the license.

15. The method of claim 14 wherein determining a status of the license comprises determining that the license is for non-commercial use of the digital content (201) and indicating to a user that the digital content (201) is for non-commercial use.

16. Apparatus for licensing digital content (201), the apparatus comprising:

- a general purpose computer; and
- a memory, the memory including programmed instructions for:
 - examining the digital content (201) to identify licensing data (300-311) within the digital content (201) indicating that processing of the digital content (201) is subject to a license;
 - examining the licensing data (300-311) to determine if the license requires explicit verification (507);
 - if the license requires explicit verification, determining a status of the license based on information not present within the licensing data (300-311); and
 - processing the digital content (201) subject to the status of the license and to the extent permitted by any license restrictions (566, 574).

-42-

17. The apparatus of claim 16 wherein the licensing data (300-311) includes a plain text portion (301, 302) and an encrypted portion (303-311), and the memory includes programmed instructions to display the plain text portion (301, 302) of the licensing data (300-311).

18. The apparatus of claim 17 wherein the memory includes programmed instructions for determining the status (501-575) of the license requesting the status of the license from a license server based on the licensing data (300-311).

19. The apparatus of claim 18 wherein the memory further includes programmed instructions for caching a response (572) from the license server (403), and determining a status of the license by inspecting the cache for a response (555-557) from the server (403) and requesting the status of the license from the license server (403) only if the status of the license cannot be determined by the inspection of the cache (556).

20. The apparatus of claims 16-19 wherein the memory further includes programmed instructions for processing at least a portion of the digital content (201) in parallel with determining the status of the license.

21. The apparatus of claim 20 wherein the memory further includes programmed instructions for determining whether the digital content (201) has been altered.

22. The apparatus of claim 20 wherein the memory includes further programmed instructions for determining that the license is for non-commercial use and indicating to a user that the digital content (201) is licensed for non-commercial use.

PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|--|--|--|
| Applicant's or agent's file reference CURL-001 PCT | FOR FURTHER ACTION <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small> | |
| International application No. PCT/US 00/ 06242 | International filing date (day/month/year) 10/03/2000 | (Earliest) Priority Date (day/month/year) 12/03/1999 |
| Applicant CURL CORPORATION et al. | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

4



None of the figures.

Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

The abstract is changed as follows:

line 2: after 'content' insert '(201)';
line 4: after 'content' insert '(201)';
line 4: after 'store' insert '(406)';
line 7: after 'content' insert '(201)'.

US 00/06242

According to International Patent Classification (IPC) or to both national classification and IPC

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|---|
| X A | <p>WO 98 25373 A (INTELLECTUAL PROTOCOLS L L C) 11 June 1998 (1998-06-11)</p> <p>abstract page 17, line 14 -page 35, line 20 ----- -/---</p> | <p>1-3, 5-7, 12, 13, 15-21, 23-25, 30, 31, 33-38, 40, 41, 45, 46, 48-50 4, 8-11, 22, 26-29, 39, 42-44</p> |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

*& document member of the same patent family

Date of the actual completion of the international search

29 June 2000

Date of mailing of the international search report

06/07/2000

Name and mailing address of the ISA
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Authorized officer

Jacobs, P

INTERNATIONAL SEARCH REPORT

International Application No

/US 00/06242

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|--|
| X A | WO 98 45768 A (NORTHERN TELECOM LTD) 15 October 1998 (1998-10-15) page 6, line 30 -page 12, line 7 page 24, line 19 -page 25, line 13 figures 1-8 --- | 1-3, 5, 14-21, 23, 32-38, 40, 47-50 4, 6-8, 12, 13, 22, 24-26, 30, 31, 39, 41, 42, 45, 46 |
| X A | EP 0 686 906 A (SUN MICROSYSTEMS INC) 13 December 1995 (1995-12-13) column 1, line 39 -column 3, line 57 column 9, line 45 -column 13, line 52 figures 4-6 --- | 1, 2, 4, 5, 13-16, 19, 20, 22, 23, 31-34, 37, 38, 40, 46-49 3, 17, 18, 21, 35, 36, 39, 50 |
| X A | US 5 287 408 A (SAMSON PETER R) 15 February 1994 (1994-02-15) abstract column 3, line 13 -column 9, line 33 figure 4 --- | 1-5, 15, 16, 19-23, 33, 34, 37-40, 48, 49 12, 13, 30, 31, 45, 46 |
| A | US 5 790 664 A (COLEY CHRISTOPHER D ET AL) 4 August 1998 (1998-08-04) abstract column 7, line 43 -column 13, line 28 figures 5-7 ----- | 2, 3, 6-13, 15-18, 21, 22, 24-31, 33-36, 39, 41-46, 48-50 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

US 00/06242

| Patent document cited in search report | | Publication date | Patent family member(s) | | Publication date |
|---|---|---------------------|----------------------------|------------------------|--------------------------|
| WO 9825373 | A | 11-06-1998 | NONE | | |
| WO 9845768 | A | 15-10-1998 | AU EP | 6492198 A 0974084 A | 30-10-1998 26-01-2000 |
| EP 0686906 | A | 13-12-1995 | US JP | 5724425 A 8166879 A | 03-03-1998 25-06-1996 |
| US 5287408 | A | 15-02-1994 | NONE | | |
| US 5790664 | A | 04-08-1998 | AU WO | 2054597 A 9730575 A | 10-09-1997 28-08-1997 |